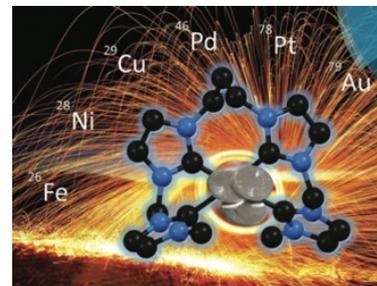




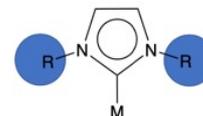
## Molecular Catalysis

Our research is focused on organometallic chemistry, medicinal chemistry and molecular catalysis. Especially carbene ligated metal precursors are applied to provide task-specific solutions in medicinal chemistry and catalysis. Varying the wingtips and backbone of imidazolium moieties facilitates changes in solubility (medicinal chemistry) and reactivity (catalysis).

Of particular interest are oxidation and hydrogenation catalysis with a wide variety of transition metals, both with respect to the elucidation of reaction mechanisms and for industrial applications. Therefore, cooperation with industrial companies on applied projects in the field of catalytic activation of small molecules plays an important role.



NHCs as ligands for transition metals in molecular catalysis



R: Influence on Stability, Activity, Selectivity

M = Fe, Ni, Cu, Pd, Pt, Au, Cu, Ru

